



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/112,777	07/10/1998	KIA SILVERBROOK	ART24-US	7299

7590

09/12/2003

KIA SILVERBROOK
SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN NSW, 2041
AUSTRALIA

EXAMINER

GOOD JOHNSON, MOTILEWA

ART UNIT

PAPER NUMBER

2672

21

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/112,777

Applicant(s)

SILVERBROOK ET AL.

Examiner

Motilewa A. Good-Johnson

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2672

DETAILED ACTION

1. This office action is responsive to the following communications: Application, filed on 07/10/1998; Amendment A, filed 10/30/2000; Amendment B, filed 07/11/2001; Amendment C, filed 08/07/2002.
2. Claims 1-4, and 7 are pending in this application. Claims 1 and 7 have been amended.
3. The present title of this application is "Producing Automatic Painting Effects in Images" (as originally filed).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogniewicz, Skeleton-Space: a Multiscale Shape Description Combining Region and Boundary Information, IEEE, 1994, pages 746-751, further in view Litwinowicz, Processing Images and Video for an Impressionist Effect, SIGGRAPH, 1997.

As per independent claim 1, a method of automatically producing an image comprising the steps of locating within the image, feature having a high spatial variance by: thresholding and skeletonising the image to produce an image comprising single pixel width definition of features; Ogniewicz discloses skeletonization or thinning to

Art Unit: 2672

reduce a shape into a one-dimensional structure, page 746, col. 1, and further discloses a threshold value, page 749, col. 1; discarding features of the produced image having a size less than a predetermined size; Ogniewicz discloses a threshold value and removing features below pixel size, page 749, col. 1; and stroking the image with a series of brush strokes emanating from remaining feature of the produced image. However, it is noted that Ogniewicz fails to disclose stroking the remaining feature of the image with brush strokes. Litwinowicz discloses brush strokes over an image to produce an impressionist style, page 1, col. 2. It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the skeleton generated image of Ogniewicz impressionist style painting disclosed in Litwinowicz so that a user may create recreate various artistic paintings to simulate custom artwork.

With respect to dependent claim 2, brush stroke have decreasing sizes near important features of the image. However, it is noted that Ogniewicz fails to disclose brush strokes. Litwinowicz discloses clipped brush strokes in edges to maintain silhouettes and details, page 6, col. 2, lines 4-14. It would have been obvious to one of ordinary skill in the art at the time of the invention to include in the skeleton generated image of Ogniewicz painting the image with the brush stroke simulation of Litwinowicz so that a user may create recreate various artistic paintings to simulate custom artwork.

With respect to dependent claim 3, brush strokes include opacity and bump maps for added realism. Litwinowicz discloses rendering brush strokes with texture, page 4, col. 1.

With respect to dependent claim 4, a predetermined portion of brush strokes undergoes random jittering. Litwinowicz discloses random variations, page 2, col. 2.

With respect to dependent claim 7, discarding located features having a size of less than 20 contiguous pixels. Ogniewicz discloses organizing according to structural importance, criteria for judging the skeleton significance at each scale, and further discloses regularization parameters, page 746, col. 2.

Response to Arguments

6. Applicant's arguments with respect to claims 1-4 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Singh et al., "Object Skeletons form Sparse Shapes in Industrial Image Settings", IEEE 1998, pages 3388-3393.

Hayat et al., "A Fast Thinning Algorithm based on Image Compression", IEEE 1991, page 2661-2664.

Chi et al, "Drawing and Animation using Skeletal Strokes", Computer Graphics 1994, pages 1-9.

Curtis et al., "Computer Generated Watercolor ", SIGGRAPH 1997, pages. 421-430.

Salisbury et al., "Interactive Pen-and-Ink", SIGGRAPH 1994, pages 101-108.

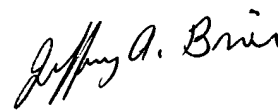
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (703) 305-3939. The examiner can normally be reached on Monday - Friday 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (703) 305-4713. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Motilewa A. Good-Johnson
Examiner
Art Unit 2672

mgj
January 29, 2003


JEFFERY A. BRINER
PRIMARY EXAMINER